

## **Contactless Payments Come to the USA**

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With the first widescale issuances of contactless bankcards in the United States underway, we are at an exciting time in the card industry. Compared to the rest of the world, the US market has been slow to adopt smart card technology; however, it appears that the market will leapfrog over standard contact smart cards to widespread use of contactless smart cards. Chase Bank and American Express have begun issuing the cards, and others will soon be following suit.

Contactless cards operate via radio frequency identification, or RFID. The data they hold is transmitted via radio waves to a reader when the reader's electromagnetic field energizes the card. Contactless bankcards operate at a frequency of 13.56 MHz. They are governed by the ISO 14443 standard, which provides for a short read range and encryption capabilities. RFID has gotten a lot of publicity recently, not all of it good, based on smart label initiatives by Wal-Mart and other large retailers—where suppliers must have RFID labels on pallets. There is also a push for electronic passports for visa waiver countries by the US government. The technology is not new and dates back to World War II.

While RFID technology is very good for identifying objects, privacy advocates and many throughout the industry are concerned about the potential for fraud if criminals can skim the data from a contactless card. Conventional bank cards and contact smart cards utilize their magnetic stripes and integrated circuit modules, respectively, to transmit data when placed within a reader; whereas contactless cards need only be tapped on or placed within the presence of a reader for the data to be transmitted. There is uncertainty around the maximum distance that a card must be placed from a reader for the information to be transmitted. In theory, the distance should be less than ten centimeters (about four inches), although some independent testing has shown dramatic differences in the read distance based on the type of antenna used. Those who are more optimistic about contactless cards can take solace in the fact that the cards should only work within a distance of four inches from the reader, and that strong encryption would render any skimmed data useless. The card industry can't afford any more negative press on the heels of highly publicized compromises of consumer data, so results obtained during the various contactless test periods must be inspiring confidence somewhere. While there will always be a tradeoff between security and convenience, merchants and card issuers are clearly convinced by the contactless business case.

Contactless technology promises to bring many benefits to the issuers, the users, and the manufacturers of contactless cards, as well as the merchants who accept them. Issuers can benefit by being first movers in an exciting new market space. Those who use contactless cards are able to maintain possession of their card throughout a transaction and can save some time when compared to using magnetic stripe cards in locations such as fast food restaurants, which only recently started accepting credit cards on a large scale.

Card manufacturers are able to provide smart card technology with very little change to their current manufacturing processes by collating and laminating contactless prelaminate into their printed sheets. Merchants benefit in many ways with contactless cards. Tests have shown that contactless cards can substantially decrease transaction times, reduce the handling of cash, and increase consumer spending when customers aren't limited to the amount of cash that they have on hand.

The benefits seem clear and the business case strong, but the end-user will ultimately determine the success of the contactless card initiative in the USA. If the transaction security proves to be reliable, there are no real obstacles to widespread acceptance. Time will tell, but the increased speed and convenience that contactless cards offer seem to be a nice fit for the US market.